

THE CLAIMS

What is claimed is:

1. An initiator device comprising:

5 an electrical initiation element having signal input nodes thereto;
 protective circuitry connected across the signal input nodes, the protective circuitry
comprising a clamping portion responsive to input signals at the input nodes to divert from the
initiation element at least a portion of such input signals, the clamping portion being responsive
to a release signal to permit the input signal to pass to the initiation element upon receipt of
10 such release signal; and

 a timer portion connected to the clamping portion and to the input nodes, and being
responsive to such input signals, for issuing a release signal to the clamping portion after pas-
sage of a clamping interval after the receipt of the input signal.

15 2. The initiator device of claim 1 wherein the clamping interval is about 100 micro-
seconds or less.

 3. The initiator device of claim 2 wherein the clamping interval is in the range of from
about 5 microseconds to 100 microseconds.

20 4. The initiator device of claim 2 wherein the clamping interval is in the range of from
about 20 microseconds to 100 microseconds.

 5. The initiator device of claim 1 comprising a unipolar clamping circuit and a unipo-
25 lar timer circuit.

 6. The initiator device of claim 1 comprising a bipolar clamping circuit and a bipolar
timer circuit.

30 7. The initiator device of claim 1 wherein at least one of the electrical initiation ele-
ment and the protective circuitry are formed as integrated circuitry.

 8. The initiator device of claim 7 wherein the initiation element and protective cir-
cuitry are mounted on a header comprising two electrical leads connected to the protective cir-

cuity, and further comprising a shell mounted on the header and a charge of reactive material in the shell for initiation by the initiation element.